

## **University of Northern Iowa Technology Transfer and Economic Development Annual Report**

### **Introduction**

The University of Northern Iowa is pleased to submit its annual report of economic development and technology transfer outcomes for fiscal year 2000-2001. UNI takes an integrated approach to meeting the needs of businesses, entrepreneurs and communities throughout Iowa and beyond. Our emphasis is placed on applying the technologies developed at UNI and our sister Regents institutions. We apply these technologies to help businesses and communities meet their individual needs and succeed in the changing economy.

A primary purpose of our outreach programs is to create opportunities for our students to actively participate in economic, community and business development projects throughout our state. We also provide faculty with a linkage to real-world projects through our external constituencies. We continually strive to target our outreach assistance in areas of academic strengths at UNI, thus positively differentiating our technical assistance programs from other outreach programs in Iowa. Emphasis is placed on providing hands-on assistance to businesses and communities to meet the individual needs of each client. Through this approach we can best provide an outstanding return on investment to our state, benefiting, in very practical ways, students, faculty, businesses, communities and Iowa as a whole.

As requested by the Board of Regents, the technology transfer and economic development plan is organized around UNI's strategic plan. Outreach programs focus on five of the eight UNI goals in three primary categories: 1) Business and Community Outreach Services, 2) External Relations and Resources, and 3) Intellectual Vitality. The following report summarizes specific actions taken in these three goal areas. While the list of actions does not include all the initiatives and projects pursued by our outreach programs, they provide excellent practical examples of our technology transfer and economic development results this past year.

In addition to highlighting specific outcomes in technology transfer and economic development, this report briefly summarizes some of our collaborative projects with Iowa State University, The University of Iowa, Iowa's community colleges and state agencies. UNI's contributions toward furthering Iowa's targeted industry clusters are also summarized in this report.

At the University of Northern Iowa, we are committed to improving the communities who entrust their students to us and to enhancing the economic well-being of Iowa's current and future citizens. This commitment is closely aligned with the University's theme of "Students First."

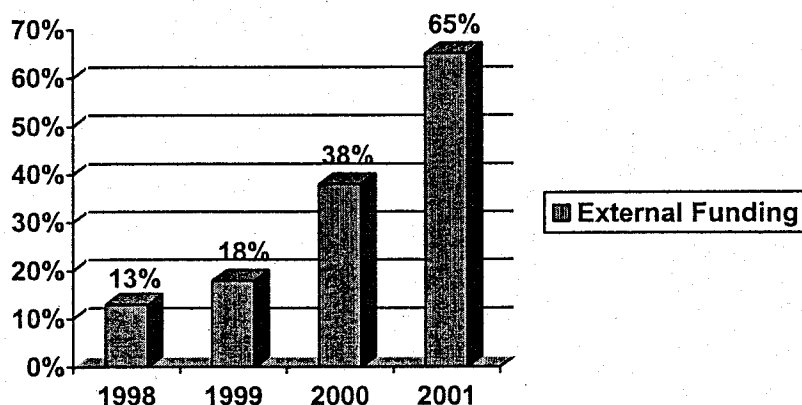
## University of Northern Iowa Economic Development And Tech Transfer Activities

### Executive Summary

The University of Northern Iowa (UNI) is serious about meeting the changing needs of businesses, entrepreneurs and communities throughout Iowa. UNI's outreach services leverage the intellectual capacity and technical expertise of faculty, staff and students to solve the problems of our external constituents while providing real-world experiences for students. UNI outreach programs focus on helping businesses and communities understand, apply and commercialize the technologies and intellectual properties developed by Regents Universities and the private sector.

Collectively, this past fiscal year has been a period of measurable success. This is demonstrated by the more than \$9,051,000 in federal, state, business-derived and private support dollars for the University's technology transfer and business/community development activities. Nearly three-fourths of these dollars were obtained from sources outside the Iowa General Assembly. Funding of outreach programs from external sources (non-general fund) increased by 65 percent during the past year.

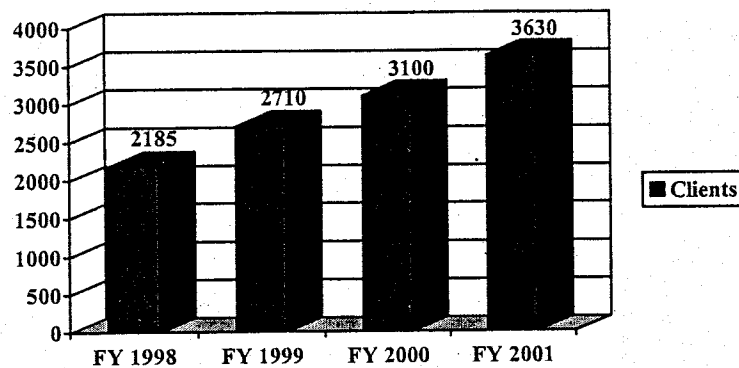
**Percentage Increase of External Funding  
(non-general fund sources)**



In other measures of success, the UNI programs in technology transfer and business/community development activities have served more than 3,200 business and 430 community clients involving almost 32,000 employees and community leaders in all 99 of Iowa's counties. More than 200 training workshops were also conducted this past year.

UNI outreach programs provided opportunities for 1,250 students and 52 faculty members to actively participate in economic development and technology transfer projects. Several of these projects were conducted with other Regents Universities, community colleges, and state agencies, resulting in a doubling of project activity with these partners in the past year. Outreach and assistance programs have also directly benefited individual citizens. Most important to the individuals affected are the more than 3,200 new jobs created and several thousand more retained, due in part to the efforts of the University's outreach programs.

### UNI Business and Community Clients



This executive summary highlights some of the major achievements of the Business and Community Services (BCS) programs that actively pursue the objectives outlined in UNI's Technology Transfer and Economic Development Plan.

The **Ag-Based Industrial Lubricants (ABIL)** Research Program (established in 1991) is committed to providing research and technology transfer activities that stimulate commercialization of soybean-based industrial lubricants, leading to the expansion of market opportunities for Iowa farmers. To date, ABIL has developed and licensed to market 11 industrial soy products. This year ABIL received a \$750,000 award from the USDA to implement an on-the-farm, soy-grease manufacturing pilot project. The ABIL program continues to receive national and international attention resulting in a variety of cooperative partnerships with academia, industry and state and federal agencies.

The **Institute for Decision Making (IDM)** has provided hands-on technical services to 426 community clients, which reported the creation of 2,400 jobs, a result they credited in large part to the efforts of IDM. IDM also received an \$80,000 special contract from the Iowa Department of Economic Development (IDED) to develop Iowa's statewide electronic database for participation in the International Economic Development Council's national site selection database standards project. Iowa will be the first state in the nation to complete a statewide database for this national approach to standardize site selection criteria and develop consistent community data in an electronic format.

The **John Pappajohn Entrepreneurial Center (JPEC)** provided research, consultation and services to 42 businesses and seed capital support to six new businesses. JPEC, through its support of the UNI SBDC, has assisted more than 500 businesses in such areas as market development, operations and information technology.

The **Small Business Development Center (SBDC)**, now part of the Regional Business Center, provided technical assistance to more than 800 small businesses last year through counseling and training. The UNI SBDC was the second busiest center in the state last year, providing 407 clients with workshops and training programs and over 400 small businesses with one-on-one business technical assistance.

The **Iowa Waste Reduction Center (IWRC)** continues to be an excellent return on investment for Iowa and its small businesses. In its 12 years since inception, the IWRC has worked with 2,100 small businesses to assess environmental compliance and outline options for waste reduction, thereby ensuring not only improved compliance but also saving small business clients millions of dollars in reduced hazardous and solid waste disposal costs. A highlight from this past year was the United States Environmental Protection Agency (EPA) verification of the Laser Touch™ targeting device for spray-painting guns and launching a manufacturing entity to produce it. Use of the device can improve spray-painting transfer efficiency by an average of 11 percent.

The **Metal Casting Center (MCC)** provided research, training and services to 32 Iowa foundries and has active contracts with 11 foundry suppliers. The MCC has involved every metal caster in Iowa this past year in the Industries of the Future Roadmap project with Iowa State University.

The **Recycling and Reuse Technology Transfer Center (RRTTC)** actively supports research in recycling and sustainable systems. The RRTTC maintains a mailing list of 450 individuals who represent the recycling industry and government. Through these means, RRTTC information reaches several thousand individuals each year.

The **Center for Energy and Environmental Education (CEEE)** provides outreach to the public, educational and civic institutions and businesses on issues related to energy efficiency and the environment. Currently 16 projects, spanning a wide variety of issues, are supported within CEEE. The Center received an Iowa Department of Natural Resources 1999-2000 Energy Leadership Award.

The **Management and Professional Development Center (MPDC)** conducted 125 workshops enrolling 2,364 business professionals from 35 businesses during the past year. Three new certificate programs were developed this year, including Information Systems, Business Essentials and Leadership Skills. The MPDC also works with an advisory board and an advisory group comprised of Eastern and Central Iowa business professionals.

The **Iowa Training Opportunities Program (ITOP)** has assisted 45 companies by training more than 500 of their incumbent workers. Funding for this training program was provided by the U.S. Department of Labor. Training was provided in the areas of Quality Technician, Understanding Bindery Operations and Computer Numerical Controls (CNC) Programming. ITOP provides short-term, highly focused technical training to meet the needs of incumbent workers and their employers. Improving the skills of workers results in increased productivity, which translates into better wages, better jobs and increased job satisfaction.

**Strategic Marketing Services (SMS)** assisted 26 businesses throughout Iowa and the Midwest with 48 client projects related to market research and analysis this past year.

The **UNI Intellectual Property Committee (IPC)** to date has reviewed 27 patent disclosures and 18 patent applications. In addition, nine license agreements and related royalty agreements have been established and two new patents were issued this past year. The UNI Research Foundation has also taken an equity position in a spin-off business based on research conducted by ABIL.

## KEY TO ACRONYMS USED IN THIS REPORT

ABIL – Ag-Based Industrial Lubricants  
Research Program  
[www.uni.edu/abil/index.html](http://www.uni.edu/abil/index.html)

BCS – Business and Community Services  
[www.bcs.uni.edu](http://www.bcs.uni.edu)

CEEE – Center for Energy and  
Environmental Education  
[www.uni.edu/ceee](http://www.uni.edu/ceee)

IDM – Institute for Decision Making  
[www.bcs.uni.edu/idm](http://www.bcs.uni.edu/idm)

IPC – Intellectual Property Committee

ITOP – Iowa Training Opportunities Program  
[www.uni.edu/itop](http://www.uni.edu/itop)

IWRC – Iowa Waste Reduction Center  
[www.iwrc.org](http://www.iwrc.org)

JPEC – John Pappajohn Entrepreneurial  
Center [www.jpec.org](http://www.jpec.org)

MCC – Metal Casting Center  
[www.uni.edu/metalcst/web](http://www.uni.edu/metalcst/web)

MPDC – Management and Professional  
Development Center [www.bcs.uni.edu/mpdc](http://www.bcs.uni.edu/mpdc)

MTS – Materials Testing Services  
[www.rrttc.uni.edu/mts](http://www.rrttc.uni.edu/mts)

RRTTC – Recycling, Reuse, Technology  
Transfer Center [www.rrttc.uni.edu](http://www.rrttc.uni.edu)

SBDC – Small Business Development Center  
[www.sbdc.uni.edu](http://www.sbdc.uni.edu)

SMS – Strategic Marketing Services  
[www.sms.uni.edu](http://www.sms.uni.edu)

## **Actions Toward UNI's Technical Transfer and Economic Development Plan**

**Goal Area 1: BUSINESS AND COMMUNITY OUTREACH SERVICES:** Expand the involvement of the University in addressing critical local, state, national and global needs that enrich the educational experiences offered by the University (Supports UNI Goal 3.0).

**Objective 1.1:** Provide opportunities for faculty and students to identify and respond to the needs of communities and businesses through professional service, applied research and entrepreneurial activities.

**Benchmarks:** Number of faculty and students participating in outreach services.  
Number of projects conducted by BCS programs involving active participation of faculty or students.

**Cumulative Outcome:** Approximately 80 BCS outreach projects involved the active participation of 52 faculty members and 1,250 students.

### **Action 1: Faculty participation in economic development projects**

UNI outreach programs actively engaged 52 faculty from the following departments in projects for business and community clients across Iowa: chemistry, accounting, marketing, economics, mathematics, geography, public policy, anthropology, sociology, community health, biology, business management, management information systems, industrial technology, environmental health and environmental science.

### **Action 2: Active student participation**

Students actively apply classroom learning to special projects for businesses, local government, community organizations and service agencies. UNI's BCS programs also provided a connection to dozens of classroom projects, special research projects and case studies for businesses and communities. More than 950 students participated in classroom projects, which directly assisted 61 BCS clients. An additional 170 students were actively involved in special research projects for businesses and communities.

### **Action 3: Student experiential learning**

Extensive learning projects were provided to approximately 130 students in the past year. Some of the internships and experiences were provided in the following professional areas: Geographic Information Systems, Management Information Systems, database development, community economic development, market research, Visual Basic, foundry processes, analytical instrumentation, statistical analysis, industrial technology, materials testing, environmental health, immigration issues and others.

### **Action 4: Market Research and Consulting Certificate Program**

An excellent example of extensive experiential learning is the Market Research and Consulting Certificate Program provided by Strategic Marketing Services. Enrolled students dedicate more than 600 hours of professional service to market research projects for private sector companies.

In addition, the students participate in an advanced market research curriculum. Twenty students participated in this program in 2001.

#### **Action 5: Student entrepreneurship fostered**

The John Pappajohn Entrepreneurial Center (JPEC) funded and supported eight students starting new businesses this past year. Businesses that were assisted included public relations, multi-media marketing, small-scale manufacturing, construction and a fiber optic invention. The JPEC also sponsored a business plan competition with the Public Relations Student Society of America. Three additional student entrepreneurs were assisted with launching businesses as a result of this competition.

#### **Objective 1.2: Assist companies and communities to adapt to and prosper in the changing economy of Iowa and the nation through:**

- **Market research and analysis;**
- **Innovative educational and technical assistance related to energy, the environment and environmentally sound practices;**
- **Hands-on community and economic development guidance;**
- **Research and promotion of agriculturally-based lubricants;**
- **Metal castings and foundry technical assistance;**
- **Job training workshops through collaborative efforts to assist lower-skilled incumbent workers;**
- **Guidance and direction to businesses and communities as they welcome immigrants and refugee populations.**

**Benchmark:** Number of business and community clients served and the geographic coverage of UNI's outreach services.

**Cumulative outcome:** BCS outreach programs have assisted more than 3,200 businesses and nearly 430 communities in all 99 counties in Iowa.

### ***Market research and analysis***

#### **Action 1: Market research assistance for existing business and industry**

Strategic Marketing Services (SMS) assisted 26 companies with 48 projects in marketplace intelligence and analysis. Some of the strategies employed by SMS include competitive intelligence, market definition and attractiveness, customer satisfaction and loyalty, market positioning and outlining specific growth strategies. SMS expanded its market research assistance to include six European countries in 2001.

#### **Action 2: Assisting entrepreneurs**

The John Pappajohn Entrepreneurial Center (JPEC) provided market research and analysis to small businesses and fledgling entrepreneurs across Iowa. Approximately 20 JPEC clients required intensive market research and analysis, which was used in the development of business plans and feasibility studies.

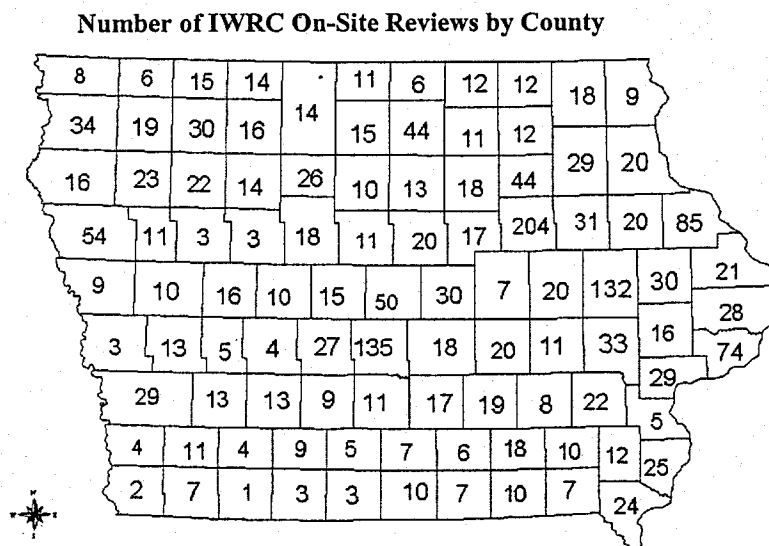
### Action 3: Internet-driven market research

The UNI SBDC delivered market research training to small businesses (primarily women-owned) in seven counties during the past year. Workshops were attended by 276 participants, focusing on internet-driven market research and business web development.

### *Innovative educational and technical assistance related to energy, the environment and environmentally sound practices*

### Action 4: Pollution prevention

Pollution prevention and economic development go hand in hand. The IWRC continues to provide free and confidential compliance and pollution assistance that saves businesses money. As seen in Figure 1, all 99 counties of Iowa have received this assistance. The IWRC strives to provide assistance to all areas of Iowa, whether municipal or rural. For example, its Mobile Outreach Pollution Prevention (MOPP) program conducts county-level tours in a different region of Iowa each year, touring Northwest Iowa this past year.



**Figure 1: Number of IWRC On-Site Reviews per County**

### Action 5: Economical approaches to solid waste problems

The RRTTC provides assistance to Iowa companies and communities regarding the development of economical approaches to solving intractable solid waste problems and providing research and guidance on public health concerns as they relate to solid waste concerns. This assistance is in the form of brief consultation, student internship projects and in-depth research projects, which emphasize sustainable by-product re-utilization and industrial ecology. For example, the UNI Materials Testing Service provides Iowa companies with affordable access to the latest in mechanical, physical and chemical properties testing for the purpose of by-product re-utilization.

### Action 6: Small business assistance for OSHA compliance

The UNI SBDC is a partner in the Small Business Compliance Alliance (SBCA) program. Working with the Iowa Waste Reduction Center and the Iowa SBDC, a program model to teach small businesses about OSHA requirements has been outlined and will be delivered statewide in the upcoming year.



#### **Action 7: Environmental science and health education**

The RRTTC provides education and guidance regarding environmental science and environmental health curricula through the participation in outreach programs and sponsoring student internships. For example, the RRTTC is a co-sponsor of the Iowa Children's Water Festival. Two thousand fifth graders from across Iowa participate in this one-day event that allows them to learn about water and how it impacts their daily lives – particularly in areas regarding environmental impact and water quality.

#### **Action 8: Rebuild Cedar Falls/Conservation City Program**

The Rebuild Cedar Falls/Conservation City Program (RCF/CCP) has a broad goal of increasing the efficiency of energy use in homes and small businesses in Cedar Falls. The project involves a number of partners, including the Cedar Falls Utilities, the Iowa Association of Municipal Utilities, the City of Cedar Falls and the Cedar Falls School District. The Iowa Department of Natural Resources provides additional support.

The foundations of this program are education and energy audits. Presentations on energy efficiency and renewable energy have reached almost 500 adults and more than 1400 students in grades one through seven. Students have learned how to do home energy audits themselves and more than 150 audits have been returned with commitments from parents to implement the measures identified on the audits. Focusing on lighting, water heating, aerators and showerheads, and temperature control, the audits have resulted in significant energy savings – the equivalent of 173,400 kilowatt hours annually. For homeowners, the payback period for investments in energy efficiency averaged just 2.8 months.

#### **Action 9: Electrathon Project**

Electrathon is administered by the CEEE, with funding support from Alliant Energy. Students from across the state design, build, test and race their own battery powered vehicles to see which can cover the most ground in one hour of racing. Each car is permitted to use 64 pounds of lead batteries, so efficiency of operation is of prime importance in determining success. Students, teachers and others associated with the Electrathon develop a real appreciation for zero emission vehicles and can be expected to be among the early adopters of hybrid cars when they become widely available.

#### **Action 10: Environmental Issues Instruction**

The impact of the CEEE is substantially multiplied when Iowa's teachers introduce their students across the state to environmental issues. Environmental Issues Instruction (eii) is a highly effective program that employs teachers to help their peers become more knowledgeable about environmental issues and to learn classroom techniques that resonate with students. Since 1989, eii has focused on a number of environmental issues, instructing more than 1,000 Iowa teachers and many thousands of K-12 students in a process that builds awareness and then understanding of issues, ultimately leading to responsible action.

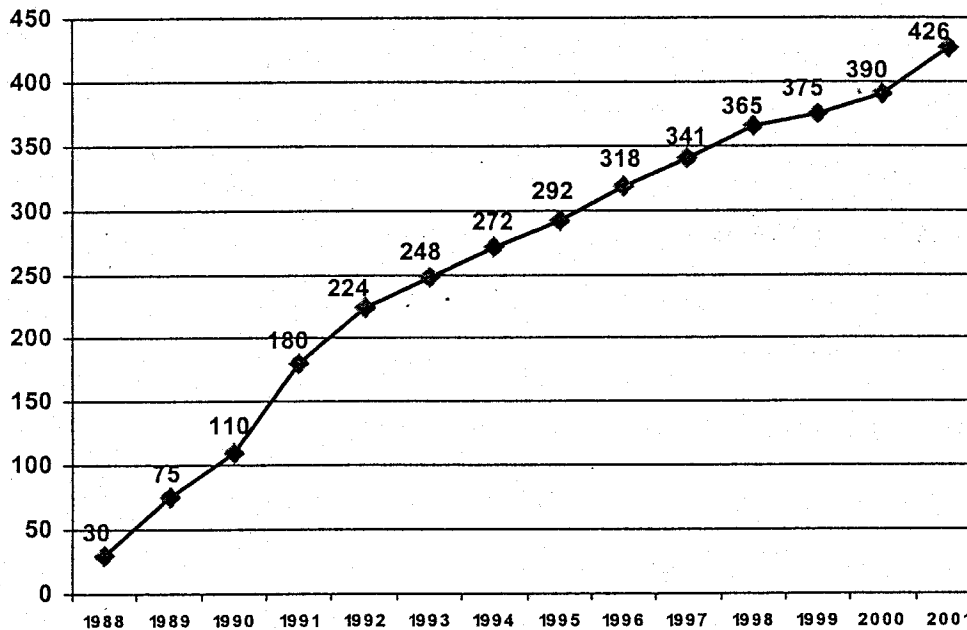
### ***Hands-on community and economic development guidance***

#### **Action 11: IDM client activity expands**

Demand for IDM services grew at a more rapid pace than at any time since 1992, with 35 new clients in FY 2001. Since its inception in 1987, IDM has provided hands-on assistance to 426 communities and economic development organizations in 95 Iowa counties (see Figure 2).

Seventy-six percent of these communities are below 10,000 in population and IDM maintains a high-activity level with 66 percent of these clients. IDM continually strives to achieve results at the community level and receives many testimonials from client communities outlining their success and the importance of IDM's assistance. While many of these results are qualitative, client communities are reporting that they have created at least 2,400 jobs this past year. IDM cannot take full credit for any of these jobs, but communities attribute a significant portion of their success to the contributions of IDM staff.

### IDM Client History



**Figure 2: Client Chart**

#### **Action 12: Demand for local communities planning assistance experiences rapid growth**

The number of "planning" clients served by IDM increased by 25 percent compared to last year. Fifteen percent of these clients needed thorough strategic planning and the remainder needed various forms of short-term economic or community development planning. Compared to prior years, clients who required broad community-wide planning, for example, noticeably increased their attention to their community's uniqueness. Communities also expanded the breadth and depth of community participation, raised an increased number of complex issues that needed to be addressed and increased their expectations for outcomes from the planning efforts. The Iowa 2010 strategic plan continues to motivate new community-wide plans and fosters interest in developing local ways to help achieve parts of the plan.

#### **Action 13: Special research projects**

IDM continues to fulfill many requests from Iowa communities on a variety of topics related to their marketing and recruiting efforts. Some of the topics that IDM researched in FY 2001 include: high-tech industries, bio-based products, industry clusters, soybean users, industry growth rates, the New Economy, the software industry, e-commerce, industries that use large amounts of electricity and how to write an RFP to obtain a consultant. IDM also began revising and updating its Industry Profiles. The new one-page format includes a description of the

industry, the transition from SIC codes to NAICS codes, industry characteristics, leading companies and industry location factors.

### ***Research and promotion of agricultural-based lubricants***

#### **Action 14: Commercialization of soybean-based lubricants**

The Ag-Based Industrial Lubricants (ABIL) Research Program is committed to providing research and technology transfer activities that stimulate commercialization of soybean-based industrial lubricants, leading to the expansion of market opportunities for Iowa farmers. To date, UNI-ABIL has developed and licensed to market 11 industrial soy products. This year ABIL implemented an on-the-farm soy-grease manufacturing pilot project. The ABIL program continues to receive national and international attention resulting in a variety of cooperative partnerships with academia, industry and state and federal agencies.

#### **Action 15: New business formation**

As a result of work carried out by UNI-ABIL in previous years, and in an effort to bridge the gap between research and the marketplace, the UNI Foundation made the decision to engage in the creation of a for-profit entity. The new company is Environmental Lubricants Manufacturing (ELM) Inc., and the UNI Foundation has given ELM exclusive license to ABIL-developed lubricants technology. ELM, with the assistance of ABIL, is successfully securing preferential relationships with suppliers such as DuPont, and distributors such as the Schumacher Elevator Company (Denver, IA). In addition, ABIL has continued to support the efforts of previous non-exclusive license holders, such as West Central Cooperative. ELM has recently launched a national marketing program to sell soybean-based greases.

#### **Action 16: Commercialization through partnerships**

ABIL continues activities in support of West Central Cooperative (Ralston, IA) a non-exclusive license holder on three ABIL-developed soy products. In addition, UNI-ABIL provided applied research and technology deployment activities relative to its partnership with Waverly Light and Power (and a marketing firm well known in the public power industry) to pursue commercialization of a dielectric transformer coolant. The program also established working partnerships with several railroads and a leading railroad supplier to field test an emerging rail-flange lubricant, as well as a national trucking fleet (along with several other mid-size firms) to field test a semi truck fifth-wheel grease.

### ***Metal castings and foundry technical assistance***

#### **Action 17: Partnerships for metal casting assistance**

The Metal Casting Center (MCC) continues to be active partners with the Iowa Manufacturing Extension Program (IMEP), Center for Industrial Research and Service (CIRAS), American Foundry Society, Iowa Department of Natural Resources (DNR), four community colleges, two national labs and the Northeast-Midwest Institute in Washington, D.C. The MCC also has active contracts with 11 companies for research and testing on a fee-for-service basis. The MCC had active projects with 12 Iowa foundries and contacts with 20 other Iowa foundries on problem solving and consultation this past year as part of its outreach efforts.

**Action 18: Partnerships with suppliers**

The partnerships established with 11 large suppliers of foundry raw materials provide the MCC with information to apply new technologies in Iowa's smaller foundries. This assistance includes information for problem solving and testing products for the individual foundry's process improvements. The MCC maintains a consortium of small foundries to assist and train them on solidification modeling.

**Action 19: Industries of the future – Metal Castings**

The Metal Casting Center has involved every metal caster in Iowa this past year for input in the State Industries of the Future Roadmap. This will allow the Iowa Metal Casters to be part of the Department of Energy (DOE) programs to reduce energy usage in one of its targeted industries. This special assistance is being provided in collaboration with CIRAS at Iowa State University.

***Job training workshops through collaborative efforts to assist lower-skilled incumbent workers***

**Action 20: ITOP successfully trains incumbent workers**

Iowa Training Opportunities Program (ITOP) has assisted 45 companies by training more than 500 of their incumbent workers. The program's focus is to enhance the skills of a company's existing workforce through short-term and highly focused training. ITOP's training curriculum is in the areas of Computer Numerical Control (CNC), Understanding Bindery Techniques and Quality Systems Technician. Follow-up surveys were conducted with the employers and trainees. Thus far, 40 percent of workers have received a pay increase, 90 percent feel they have developed new skills and 88 percent would like additional training.

**Action 21: Collaboration key to successful training**

In order to deliver the training, ITOP formed a partnership with eight community colleges and three IMEP Account Managers. ITOP has also collaborated with the Iowa Department of Economic Development (IDED) and the Iowa Workforce Development (IWD). This collaboration ensures that ITOP's training program supplements other state worker training efforts rather than duplicating efforts already within the state. Officials from IDED and IWD also serve on the ITOP Advisory Board.

***Guidance and direction to businesses and communities as they welcome immigrants and refugee populations***

**Action 22: Communities prepare for new Iowans**

IDM has been actively assisting Iowa communities with articulating their future vision for a diverse community and assessing their readiness and capacity at the local level. These efforts have included participating in the Governor's Pilot Communities Project by conducting community assessments in the three pilot communities.

**Action 23: New Iowans handbook and website**

In order to assist Iowa communities to better understand the needs of new Iowans, a special handbook was developed. *Welcoming New Iowans: A Guide for Citizens and Communities* is a handbook authored by Dr. Mark Grey and published by the University of Northern Iowa. The handbook is in its second printing and has been distributed throughout Iowa to economic

development professionals, elected officials, local government professionals and community groups. In addition to the handbook, UNI has developed a New Iowans Homepage ([www.bcs.uni.edu/idm/newiowans](http://www.bcs.uni.edu/idm/newiowans)) that provides resources for citizens and communities. The New Iowans Homepage, which is maintained by IDM, provides links to other web sites and current informational resources, including listings of cultural events around the state, recommended readings on immigrant and refugee newcomers and a list of diversity committees in various Iowa communities.

**Objective 1.3: Expand professional and management development training and learning opportunities for private businesses and public sector agencies.**

**Benchmark:** Number of training workshops conducted and number of participants.

**Cumulative Outcome:** More than 200 workshops were conducted, which included nearly 3,000 participants from 110 businesses.

**Action 1: Professional development workshops**

The Management and Professional Development Center (MPDC) conducted 125 workshops enrolling 2,364 business professionals from 35 businesses. Three new certificate programs were developed this year, including Information Systems, Business Essentials and Leadership Skills. The MPDC also works with an advisory board and an advisory group comprised of Eastern and Central Iowa business professionals

**Action 2: Training consortium**

The MPDC recently organized a training consortium of professionals interested in professional development and management training. The consortium provides input to the MPDC related to changing business and industry needs and types of workshops desired. Training workshops are then developed to meet the needs of business and industry.

**Action 3: Heartland Economic Development Course**

The Heartland Economic Development Course, administered by IDM, offers one week of intensive training in the basic concepts, information, methods and strategies for local economic development. IDM is partnering with the statewide professional development organizations of Oklahoma, Kansas, Nebraska, Missouri and Iowa. IDM is responsible for course curriculum development, facilities and course logistics, maintaining International Economic Development Council (IEDC) accreditation, promotion of the course and financial management. Since April 2000, 42 new economic development professionals in Iowa have attended the Heartland Economic Development Course that is designed to meet the steadily increasing need for continuing higher education in the field of economic development.

**Action 4: Short courses for foundries**

The Metal Casting Center has developed short training courses to meet the needs of Iowa's foundries. These include casting design for engineers, basic foundry training for floor people and sand testing for lab technicians. These training sessions are offered monthly.

**Action 5: Comprehensive entrepreneurship training**

The SBDC continues to provide comprehensive entrepreneurship training programs each spring and fall at the new Regional Business Center. In the past year, 31 new and existing companies completed the FastTrac Entrepreneurship Certification Program. In total, the UNI SBDC

delivered 51 workshops/training on site at the Waterloo location and 27 in communities outside Black Hawk County.

**Objective 1.4: Expand entrepreneurial and small business opportunities and technical assistance for UNI students and faculty and for the citizens of Iowa.**

**Benchmark:** Number of entrepreneurs and small businesses served.

**Cumulative Outcome:** Nearly 1,000 entrepreneurs and small businesses were assisted by UNI outreach programs and UNI's first small business incubator was opened.

**Action 1: Number of small business clients sets record**

The UNI SBDC, now part of the Regional Business Center, served of more than 800 small businesses last year with counseling and training. The UNI SBDC was the second busiest center in the state last year, serving 407 clients in workshops and training programs and more than 400 small businesses with one-on-one business technical assistance.

**Action 2: Regional Business Center and business incubator celebrate successful beginning**

The new Regional Business Center opened in downtown Waterloo in March of 2001. The center features a business incubator, a 14-station computer lab, virtual conferencing/training facilities, seven incubator suites and a "one-stop" approach to small business assistance in Eastern Iowa. The RBC will also provide expanded experiential opportunities for UNI students to interact with the business community and become a focal point for small business services in Northeastern Iowa. Five new businesses have started or have committed to space in the new incubator.

**Action 3: Venture Capital Conference**

Annually, the JPEC is a co-sponsor of the Iowa Venture Capital Conference (IVCC), which offers learning opportunities for private businesses and public sector agencies in Iowa. Each IVCC conference has several keynote presentations and breakout sessions dealing with numerous issues important to entrepreneurs and development agencies.

**Action 4: Student business plan competition**

The JPEC is a co-sponsor of the Pappajohn New Venture Business Plan Competition. Student business owners receive technical assistance for their business concept and are assisted with developing these ideas into viable businesses. Three winners are selected from the competition and each receives a \$5,000 award to be used as seed money for their business.

**Action 5: Entrepreneurial education and assistance**

The JPEC is the sponsor of Selected Topics for Students, a speakers series that presents UNI students, faculty and staff with information about subjects of their choice. Three topics are chosen each semester and qualified speakers present information on the chosen topics.

The JPEC teaches a two-hour semester course on starting a small business on behalf of Hawkeye Community College. This satellite course (offered in Waverly) covers introductory information about financing, marketing and structuring a business.

The JPEC made its website ([www.jpec.org](http://www.jpec.org)) bi-lingual to assist Hispanic populations with small business guidance and has prepared and compiled literature in Spanish to assist Hispanic entrepreneurs.

**Action 6: Minority business development**

The JPEC, the SBDC and KBBG-FM (radio – 88.1 FM) have partnered to provide technical assistance to entrepreneurs via a radio show offered on the second Monday of each month and broadcast twice that day. Each show presents information about starting a small business and covers a topic area of a business plan. When all of the shows are followed in order and the information is utilized in conjunction with a Regional Business Center consultant, the entrepreneur will have developed a business plan. This business plan can be entered in the minority business plan competition being sponsored by the JPEC, SBDC and KBBG. The winner will receive a \$5,000 seed grant.

In the Waterloo community, the UNI SBDC launched a series of “Smart Start” classes in Spanish and Bosnian/Croatian. These no-fee, one-hour classes are designed to provide initial business start-up or expansion information to pre-venture clients. A comprehensive entrepreneurship program in Spanish will be introduced in February 2002.

**Objective 1.5: Integrate technology into technical assistance outreach services.**

**Benchmark:** Percentage of programs actively integrating technology in outreach programs.

**Cumulative Outcome:** All UNI outreach programs have integrated technology into their technical assistance, achieving a 100 percent participation rate.

**Action 1: Spray Technique Analysis Research**

The Spray Technique Analysis Research (STAR) program of the IWRC provides training in conjunction with three community colleges: Hawkeye Community College, Scott Community College and Northeast Iowa Community College. These programs train spray-painting technicians how to optimize their painting technique and make use of the Laser Touch™ paint applicator for cost savings and environmental efficiency.

**Action 2: Technical problems in Metal Casting**

The Metal Casting Center serves regional metal casters with problem solving and technical assistance with casting problems. The industry projects that the MCC is involved with help keep them on the leading edge of new technology developments to assist Iowa metal casters.

**Action 3: Integrate technology into small business technical assistance**

The opening of the new Regional Business Center was a great step forward for UNI's technology outreach efforts to the small business community. A 14-station computer lab was opened in March at the new downtown facility, featuring state-of-the art software and hardware. High-speed internet connectivity and on-site technical assistance is provided to businesses with technology issues. Iowa's first SBA Business Information Center (BIC) opened and served more than 50 small business owners in the last year. The BIC offers many databases and technical publications for small businesses.

#### **Action 4: Materials Testing Service**

The UNI Materials Testing Service (MTS) provides Iowa companies with affordable access to the latest in mechanical, physical and chemical properties testing for the purpose of by-product reutilization. Information gained from MTS projects is shared via the MTS website and through Recycle Iowa.

#### **Goal 2: External Relations and Resources: Establish strong and mutually beneficial relationships with external constituencies (Supports UNI Goal 8.0).**

**Objective 2.1: Augment University-based funding with additional support from federal, state, private and business sources to further develop the University's expertise in technology transfer, economic development and faculty entrepreneurial activities.**

**Benchmarks:** Amount of funding generated from non-UNI sources.  
Percentage increase in externally generated funds from corporate sponsors, foundations, federal grants and fees for services.

**Cumulative outcome:** UNI outreach programs generated more than \$6.2 million in non-general fund sources.  
UNI outreach programs increased non-general fund sources by 65 percent in the past year.

#### **Action 1: ABIL appropriation leverages federal and corporate support**

Core support for ABIL was provided by state funds (value-added ag program - \$275,000) and federal support (from the United States Department of Agriculture). Funding was leveraged such that an additional USDA grant in the amount of \$750,000 was received to investigate on-the-farm grease production. Research awards from the Iowa Soybean Promotion Board (\$25,000) supplemented the budget. ABIL also offers fee-based testing services that provide additional funds totaling approximately \$50,000 - \$70,000 per year. In addition, Pioneer Hi-Bred International named ABIL director, Dr. Lou Honary, as the recipient of a \$250,000 five-year "Professorship of Innovation" appointment. The professorship will allow Honary to host special agricultural conferences on innovation, travel to other businesses and centers known for progress in the field, and will provide research assistantships and internships. In all, each \$1 of state support generated an additional \$5 of federal government and corporate support.

#### **Action 2: IDM conducts special projects for state agencies**

IDM received special contract appropriations totaling \$101,000 from Iowa Workforce Development (IWD), Iowa Department of Economic Development (IDED) and the Rural Development Council to conduct special projects for these agencies. These projects are outlined in further detail under the "collaborative projects" section. More importantly, state agencies saved more than \$100,000 by contracting with UNI, due primarily to IDM using student assistants in each project.

#### **Action 3: IWRC leverages state funding**

The IWRC continues to successfully augment its state funding with support from federal and nonprofit sources. For every \$1 invested in state funding, IWRC secured an additional \$1.65 in federal and nonprofit funding. Of the overall IWRC annual budget, approximately \$1.65 million is federal funding and almost \$1 million is state funding.



**Action 4: Broad funding base helps Regional Business Center become a reality**

The UNI SBDC embarked upon an ambitious public/private partnership with a half-dozen public and private entities to develop the UNI Regional Business Center (RBC) in downtown Waterloo. The \$900,000 project was renovation of a white elephant downtown property into a small business assistance center and second floor private sector offices. The RBC features a small business incubator, a business technology computer lab and the offices of the SBDC, SBA, and SCORE. Funding sources include \$265,000 from the Economic Development Administration, \$500,000 in private sector funding, \$60,000 SBA funding, a \$25,000 grant from Qwest and a reduced rental/tax abatement package from the local community. The RBC will serve nearly 1,000 small business clients annually with technical assistance, computer and technology training programs, e-business assistance and incubator services.

**Action 5: SBDC leverages public and private support for programming**

SBDC funding from the state helped generate additional support of more than \$100,000 from agencies, foundations, partners and consortia.

**Action 6: UNI-funded research provides additional support for multiple agencies**

Principle investigators from RRTTC funded projects are encouraged to use their research results as a basis to obtain additional funds from other agencies. This includes grants from the Department of Economic Development, the National Science Foundation, the Department of Energy, the Environmental Protection Agency (EPA), cooperative projects with industry groups and agencies such as the Black Hawk County Health Department.

**Action 7: Fees for service fund programs**

Strategic Marketing Services (SMS) received federal funding of \$75,000, plus self-generated revenues of \$300,000 and technology transfer funds of \$135,000 in the past year. SMS, combined with the Management and Professional Development Center, generated nearly one million dollars in private revenues in the past year.

**Action 8: Grant received to address environmental issues (CEEE)**

Federal grants totaled \$133,000: *Environmental Issues Instruction (eii)* (\$85,500 from the Eisenhower Professional Development Grant Program); *Iowa Summer Lakes Study* (\$12,000 from the National Aeronautics and Space Administration); *Community and Economic Regeneration through Strengthening the Local Food Economy* (\$21,500 from the U.S. Department of Agriculture); *Waste Reduction: Piloting a Curriculum & Training 7-12 Grade Teachers* (\$14,000 from U.S. Environmental Protection Agency through the Iowa Waste Reduction Center)

State grants totaled \$163,390: *Greening of UNI* (\$12,500 from the Iowa Department of Natural Resources (IDNR)); *Community and Economic Regeneration through Strengthening the Local Food Economy* (\$16,900 from the Leopold Center); *Yards for Kids* (\$10,000 for IDNR); *Iowa Outreach Initiative for Waste Reduction, Reuse and Recycling* (\$3,000 from the Recycling, Reuse, Technology Transfer Center); *Waste Reduction: Piloting a Curriculum & Training 7-12 Grade Teachers* (\$14,990 from a resource enhancement grant, and \$14,000 from state funds through the Iowa Waste Reduction Center); *If Not You Who? Waste Reduction Education Campaign* (\$60,000 from IDNR, \$10,000 from the Black Hawk County Solid Waste Commission); *Iowa Energy Poster Contest* (\$2,500 from the Iowa Energy Center).

Foundations/Private Sector Grants totaled \$140,000: *Iowa Summer Lakes Study* (\$95,000 from Roy J. Carver Charitable Trust); Energy Educator Agreement (\$20,000 from Cedar Falls Utilities); *Iowa Electrathon* (\$15,000 from Alliant Energy); *If Not You Who? Waste Reduction Education Campaign* (\$10,000 from Blue Stem Recycling).

**Objective 2.2: Raise awareness and appreciation among local and regional constituencies for the programs and services provided to businesses and communities.**

**Benchmarks:** Percentage increase in special promotional efforts conducted.  
Level of awareness in Iowa – periodic survey.

**Cumulative outcome:** Public relations and promotional efforts increased by 38 percent in the past year.  
Public awareness surveys were conducted in some of Iowa's targeted market areas, which demonstrated a heightened awareness of UNI's outreach programs.

**Action 1: One-Stop Initiative**

The Board of Regents asked each of the three Regents Universities to create a one-stop location and contact person for external requests for business and community assistance and for reporting progress. UNI had already started to move in this direction with the creation of its Business and Community Services (BCS) Division last year. BCS and IDM Director, Randy Pilkington, was selected as the primary point of contact for UNI. Presentations have been made by the Regents one-stop contacts to IDED, Professional Developers of Iowa, Iowa Chamber of Commerce Executives and others. This initiative should simplify the process of obtaining assistance from the Regents Universities.

**Action 2: Statewide newsletters**

Ten BCS outreach programs publish a newsletter. In all, 24 newsletters were mailed to more than 9,000 business, community and school leaders across Iowa and beyond.

**Action 3: Presentations**

UNI outreach programs presented to 42 different statewide, regional and national audiences during the past year, reaching more than 8,300 participants. Most of the presentations were professional associations actively involved in economic development and technology transfer, with 75 percent of the attendees from Iowa.

**Action 4: Active involvement in statewide associations.**

UNI outreach programs are active members of statewide associations involved in promoting economic development and technology transfer. Examples of UNI leadership positions in state associations include the Professional Developers of Iowa Board, Iowa Chamber of Commerce Executives, Iowa Department of Economic Developers Board, Iowa Industries of the Future, Iowa Business Council, and others.

**Action 5: RBC promotes new facility**

An opening gala was held in June of 2001 to celebrate the new Regional Business Center (RBC) in downtown Waterloo. A series of articles was published in advance of the opening, which featured the programs and services of the new center. A total of three open houses have been

hosted during the past year to raise awareness in the banking, academic and business communities about the RBC.

**Action 6: CEEE expands educational outreach**

The CEEE made direct contact with 87,000 adults, 41,000 children and 2,200 UNI students to increase awareness of environmental and energy-related issues. In addition, the CEEE reached an estimated audience of 165,000 through print media, radio, television and direct mail pieces.

**Action 7: ABIL benefits from corporate relationships**

ABIL's success and recognition at the national level have resulted in attracting industry giants such as DuPont and John Deere. Furthermore, a testing agreement with John Deere has brought about a financial commitment from John Deere to test and approve soy-based tractor hydraulic oil at ABIL for John Deere tractors. John Deere also asked ABIL to formulate biobased cotton-picker spindle grease, which is currently undergoing field-testing at a John Deere site in Texas. International recognition has led to exclusive agreements with European companies, as well as, cooperative partnerships to test soy products with countries such as India.

**Objective 2.3: Solicit external input and advice regarding UNI's business and community services outreach programs.**

**Benchmark:** Percentage of programs utilizing advisory councils.

**Cumulative Outcome:** All UNI outreach programs actively incorporate advisory councils or committees to evaluate progress and provide input.

**Action 1: Advisory Councils**

UNI economic development and technology assistance programs expanded their emphasis on building new partnerships through expanded advisory council membership, pursuing joint projects with Regents Universities, Iowa community colleges and assisting state agencies and departments. As a result of this emphasis, partnering projects with Regents Universities, community colleges and state agencies has increased 55 percent during the past year.

**Action 2: Customer Satisfaction and Awareness Survey**

Strategic Marketing Services conducted a survey of several metro areas in Iowa to ascertain the level of community and business awareness toward UNI's outreach programs and services. Special efforts are being made to improve any weaknesses indicated in the survey results.

**Goal 3: Intellectual Vitality: Create and maintain an intellectually stimulating environment for all members of the University community (Supports UNI Goals 1, 2 and 3).**

**Objective 3.1: Integrate the University's applied research, technology transfer and economic development programs into the relevant academic programs.**

**Benchmark:** Percentage of colleges, departments and outreach programs participating in research and/or technical assistance programs.

**Cumulative Outcome:** Each college and nearly 90 percent of academic departments directly participated in applied research and technical assistance projects throughout Iowa.

**Examples of student and faculty participation in research and/or technical assistance programs:**

Fifteen MBA students conducted their "capstone" projects for area businesses. These projects included process analysis, marketing plan development, accounting process audit, e-commerce marketing plan preparation, financial analysis of operating costs for a new product line and others.

ABIL student assistants generate a substantial volume of data regarding soybean-based lubricants. Students from several disciplines augment what they have learned in their respective programs by their involvement in UNI/ABIL projects.

IDM provided research opportunities for nine faculty members in the academic disciplines of economics, mathematics, marketing, geography and public policy. Many of these research projects incorporated student group projects and were applied at the community or business level. Some of these research projects included:

- Analysis of underemployment in Iowa
- Probability models to assess commuting patterns
- Economic impact analysis of local economic development projects
- Developing a survey instrument for a statewide laborshed study
- GIS overlays for determining laborshed information for Iowa communities

The RRTTC provided funding for applied research and student internship support on projects focusing on the development of economical approaches to solving intractable solid waste problems and providing research and guidance on public health concerns as they relate to solid waste concerns. Faculty and students from several departments and programs including Biology, Chemistry, Marketing, Public Policy, Health, Physics, Economics, Industrial Technology and Women's Studies have been involved in these projects. The projects are multidisciplinary and can be integrated across the curriculum, enhancing the students' classroom learning experiences.

The MCC provides research opportunities for three faculty members in the Industrial Technology Department and one faculty member in the Chemistry Department. These projects involve students and the results are used by the metal casting industry.

MPDC provided opportunities for faculty to work with the private sector to gain knowledge that can be used in the classroom. More than 25 faculty members served as instructors for MPDC programs and classes.

SMS provided research activity for five faculty members in the Marketing Department in the areas of market analysis and survey techniques.

CEEE worked with students and faculty to analyze sources of pollution and suggested remediation for two northeast Iowa lakes: Casey Lake in Tama County and Silver Lake in Delhi in Delaware County. This project addressed the number one environmental problem in Iowa:

water pollution from excessive runoff of nutrients from agricultural and urban lands. Ten UNI faculty members and approximately 15 undergraduate students per summer have been involved in the project over the last three summers. In addition to the funding organizations, the Delaware County Conservation Board, the Iowa Department of Natural Resources and the Natural Resources Conservation Service have joined forces to help with the research.

In partnership with Wellness and Recreation Services, the CEEE developed a program, the Cedar Valley Commuting Initiative, to promote commuting to the University by non-motorized means. Popularly called "Sole Power," the project was largely staffed by an enthusiastic group of UNI students. Students identified barriers that impeded people from biking to the campus and worked to reduce them. Many students, faculty and staff signed pledges to use non-motorized means to get to work for a minimum number of days each month.

CEEE, the College of Business Administration and the UNI Office of Media Relations formed an educational partnership for students in the *Consumer Behavior* course and the *Promotions and Marketing* course. The partnership provided business students with "real-world" marketing projects at CEEE. The students were divided into teams to work on various marketing and advertising aspects of the *Iowa Electrathon*, the *Iowa Energy Poster Contest* and *Rebuild Cedar Falls/Conservation City Program*.

**Objective 3.2: Integrate experiential learning opportunities, focused on technology deployment and business development, with students' academic degree programs.**

**Benchmark:** Number of experiential learning opportunities provided.

**Cumulative Outcome:** UNI outreach programs provided for 130 students and special research projects and classroom projects for another 1,100 students.

#### **Examples of Student Experiential Learning:**

ABIL continues to offer students a variety of experiential learning opportunities in the areas of applied and basic analytical research, product and process engineering, electronics and instrumentation, and public relations and marketing. During the 2000-2001 academic year, ABIL has employed chemistry and environmental sciences students (undergraduate and graduate level) to operate analytical and biodegradability test equipment, business students to support a quarterly newsletter, the *ABIL Advocate*, and to support basic programmatic accounting needs, and industrial technology students to operate performance testing equipment and to assist with the fabrication of stationary test equipment and pilot plant manufacturing. In addition, a class of information systems students have revised the ABIL website, constructed an internal inventory database and began assembling ABIL data to develop a more formalized research database.

IDM provided direct experiential learning experiences for 12 undergraduate students and two graduate students in the areas of community economic development. Many of the experiential learning experiences included internships at the community level.

The Iowa Waste Reduction Center has employed 130 students since its inception. Nineteen students participated in experiential learning at the IWRC this past year. These students were integral to IWRC's applied research, watershed projects, Geographical Information Systems,

website maintenance, database management, air-permitting efforts and public relations. IWRC interns comprise a variety of disciplines including MIS, geology, communications, industrial technology and public relations.

During the past year, the UNI JPEC supported 11 students in experiential learning situations. Two were interns in the Center, meeting with clients and doing research for clients in new venture start-ups. The JPEC financially and educationally supported six students starting their own businesses.

The SBDC provided internship opportunities for UNI students in the areas of market research, accounting support and classroom instruction. These students gained direct experiential involvement with small business owners at the center.

SMS provided direct experiential learning experiences for 20 students. These included experience in marketing and market research. SMS introduced and now offers a Certificate in Consulting – Market Research.

ITOP provided experiential learning opportunities for five students during the past year. Students were involved with all aspects of program implementation including curriculum development, marketing and financial management.

Through participation in research, outreach and student internship programs, RRTTC student assistants have the opportunity to work first-hand with members of Iowa's business and industry community. They have the opportunity to utilize the knowledge gained in the classroom as they work on solving relevant problems and address issues facing business and industry today.

**Objective 3.3: Foster the development of faculty and staff through the intellectual properties protection process.**

**Benchmark:** Number of intellectual property disclosures.

**Cumulative Outcome:** Intellectual properties policies were updated and improved during the past year and professional staffing was added to the Intellectual Property Committee to provide faculty and staff advice and assistance in pursuing patent disclosures, applications and licensing agreements.

**Action 1: New disclosures and patent applications**

During FY 2001, two new disclosures were made to the UNI Office of Intellectual Properties and two applications were filed. To date, the UNI IPC has 27 patent disclosures and 18 patent applications. Nine license agreements and disbursements of royalties have also been a part of staff reporting/tracking responsibilities. In addition, the University Research Foundation has recently agreed upon an equity position in a spin-off company in exchange for rights to the intellectual property.

**Action 2: License agreement for Laser Touch**

Staff members from IWRC have developed the Laser Touch™ spray-painting gun. A license agreement was finalized with Laser Touch and Technologies and a local entrepreneur has successfully launched a manufacturing company to produce the Laser Touch™. Early marketing efforts demonstrate strong demand for the spray gun.

**Action 3: Coordinates IP with Plant Materials Center**

The SBDC continued work with the proposed UNI Plant Materials Center to determine what intellectual property rights may be related to the 'yellow tag' seed developed in the College of Natural Sciences.

**Action 4: ABIL develops additional soybean-based products**

The ABIL Research Program has developed and licensed 11 industrial soybean products for commercial use.

## Examples of Collaborative Projects

Coordination and collaboration are critical in today's quest for resources and for shared responsibility in implementation. UNI partners with other economic development service providers in Iowa, including the Iowa Department of Economic Development, Iowa Workforce Development, the Department of Natural Resources, Recycle Iowa, Iowa State University, the University of Iowa, USDA Rural Development, Governor Vilsack's office and community colleges. Some of the joint projects we have pursued during the past year are summarized in the following paragraphs.

### **New Iowans – Governor Vilsack's Office**

IDM has been actively working with Iowa communities to outline their future vision for a diverse community and assess their readiness and capacity at the local level. These efforts have included participating in the Iowa Pilot Communities Project and the development of a community handbook for welcoming new Iowans.

In December 2000, Governor Thomas Vilsack announced the selection of three Iowa communities to serve as pilot communities for the "New Iowans" project: Marshalltown, Mason City and Fort Dodge. The purpose of the Pilot Communities Project was to develop plans, procedures and processes to recruit and retain highly skilled individuals to these communities. Each pilot community was charged with developing its own recruitment and accommodation plans that could be duplicated in other Iowa communities.

As part of this process, Dr. Mark Grey, a UNI Anthropology professor, and the Institute for Decision Making were requested by the Governor to help assist the three pilot communities conduct preliminary community assessments. The purpose of these assessments was to evaluate each community's current and future labor needs and the community resources available to better accommodate new residents. Each community will utilize their community assessment as they develop their plans.

### **New Iowans – Handbook with Website**

IDM played an active role in the development of the *Welcoming New Iowans: A Guide for Citizens and Communities* handbook that was authored by Dr. Mark Grey and published by the University of Northern Iowa. The handbook is in its second printing and has been distributed throughout Iowa to economic development professionals, elected officials, state agencies, local government professionals and community groups. In addition to the handbook, UNI has developed a New Iowans Homepage ([www.bcs.uni.edu/idm/newiowans](http://www.bcs.uni.edu/idm/newiowans)) that provides resources for citizens and communities. The New Iowans Homepage, which is maintained by IDM, provides links to other web sites and current informational resources, including listings of cultural events around the state, recommended readings on immigrant and refugee newcomers and a list of diversity committees in various Iowa communities. In addition, the web site provides an electronic version of the handbook.

### **IDM Completes Major Database Project for IDED**

Iowa's communities have long collected information about themselves. IDED has created various programs such as I-Media and Info-To-Go to help them format the data. However, the need for nationwide standards for community information has become important for several reasons. Paramount among the concerns regarding collecting community information is the difficulty users of that information have in making meaningful community-to-community



comparisons when considering potential business locations. In addition, the burgeoning reliance on the internet and the World Wide Web as the tool of choice in obtaining information about potential locations has led to a time compression that demands more and better information to be provided more rapidly. (These national standards are comprised of 25 different categories of information containing approximately 1,200 data points.)

IDED was one of the first state level development agencies to begin considering the impact these new standards could have on how the department interacts with communities and information seekers. Rather than expecting each community to undertake the collection of all of the information sought to complete the database standards, IDEED agreed to provide information for most of the data fields. Members of the IDM staff, augmented greatly by UNI student employees, have completed the initial populating of the International Economic Development Council's Site Selection Standards database. IDM is now working with IDEED to enter the final data fields of community data.

### **Laborshed Studies Transition to IWD**

Since 1998, IDM has been conducting laborshed studies for Iowa communities using its innovative methodology that has received national recognition. During that period of time, IDM completed 24 laborshed studies for Iowa communities. Since 1999 those studies were done in partnership with the Iowa Department of Economic Development (IDEED) and Iowa Workforce Development (IWD) for communities that met specific criteria and for "immediate opportunities" (expansion projects or prospects).

During the 2000 legislative session, the General Assembly mandated that as of July 1, 2001, Iowa Workforce Development (IWD) assume responsibility for conducting laborshed studies for Iowa communities. This required IDM staff members to begin training IWD's Workforce Research Bureau staff members on how to conduct laborshed studies for Iowa's communities while also completing laborshed studies already in process. The training covered the process of drawing the laborshed based on employer provided data, conducting the telephone survey and analyzing the collected data. It has also included conducting the follow-up analysis that is often requested by communities.

As of July 1, 2001, IWD's Workforce Research Bureau assumed responsibility for conducting laborshed studies and providing follow-up analysis. These studies will replace the previous county-based labor surveys conducted by the agency for the past several years. IDM staff will continue to provide technical guidance to IWD staff during the next year.

### **Economic Impact for IDEED Board**

The Iowa Department of Economic Development (IDEED) evaluates many projects each year that apply for financial assistance. Board members placed additional emphasis in 2001 toward assisting projects within Iowa's three targeted cluster groups. In addition, the pool of funds available for assisting local development projects had been reduced significantly over the past two years. IDM staff offered assistance to the IDEED staff and board by conducting an economic impact assessment for a major development project. The economic impact analysis provided details of the upstream/downstream linkages of the project and related impacts on other sectors of the area economy. IDM has offered to conduct economic impact assessments on other projects requesting financial assistance from IDEED.

### **SBDC-ISED Women's Enterprise Development**

The SBDC continues to work in partnership with the Institute for Social and Economic Development (ISED) to deliver technology-training programs to women statewide. The UNI SBDC component of this program has served more than 1,000 female business owners since 1998 and has facilitated the start up of nearly 150 new women-owned businesses in Iowa.

### **SBDC and IWD Focus on Displaced Workers**

UNI SBDC collaborated with Iowa Workforce Development Centers this past year to deliver seminars on entrepreneurship to displaced workers in Eastern Iowa. Programs were held in New Hampton and Oelwein. The SBDC provided client technical assistance services to the Department of Agriculture ReVamp Program and co-hosted a seminar on small business financing with the Targeted Small Business Program of IDED.

### **ABIL – ISU Center for Crops Utilization**

ABIL again partnered with Iowa State University (specifically ISU-Center for Crops Utilization Research) to explore potential non-food, ag-based forestry products. The collaborative research program will investigate new methods for using vegetable oils and derivatives for wood impregnation, lubrication and preservation (patent-pending). Targeted applications include: railroad ties, utility poles, marine and residential landscaping timbers (playground lumber) and wood bearings. UNI-ABIL has applied for a patent on wood preservation technologies.

### **ITOP Collaborates with IDED and IWD**

ITOP has collaborated with the Iowa Department of Economic Development (IDED) and the Iowa Department of Workforce Development (IWD). This collaboration started with the planning of the ITOP program and continued throughout the ITOP grant period. This collaboration ensured that ITOP's training program supplemented other state worker training efforts rather than duplicating efforts already within the state. Officials from IDED and IWD also served on the ITOP Advisory Board.

### **UNI Metal Casting Center and ISU**

The University of Northern Iowa's Metal Casting Center (MCC) has teamed with Iowa State University's CIRAS to lead the Iowa Industries of the Future – Metal Casting project. This is a two-year project involving every metal caster in Iowa to incorporate energy efficiency in their operations. Support for this project is provided by the U. S. Department of Energy. The MCC also continues to support the IMEP by helping them solve problems for metal casters in their areas of responsibility.

### **IWRC – STAR Training with Community Colleges**

To date, the Iowa Waste Reduction Center (IWRC) has collaborated with 15 community colleges within Iowa and other states to transfer the Spray Technique Analysis and Research (STAR) Training Program. This collaboration entails community college instructors training at the IWRC applied research facility followed by the purchase of necessary equipment by either the community college itself or, in some instances, the IWRC. Finally, IWRC staff travel to the community college to aid the instructor in initial training. Communication with STAR training instructors at the community colleges is ongoing, and on-site follow-up with the colleges will occur during the next year to maintain quality STAR training standards.

### **JPEC – Iowa Venture Capital Conference and Awards**

Annually, the Iowa Department of Economic Development (IDED), Equity Dynamics, and the five John Pappajohn Centers from the University of Northern Iowa, Iowa State University, University of Iowa, Drake University and North Iowa Area Community College join together to host the Iowa Venture Capital Conference (IVCC). More than 800 people were in attendance this year. Several prominent business leaders from Iowa were speakers. In addition, John Pappajohn, Equity Dynamics, and the five John Pappajohn Centers join together to host the Pappajohn New Venture Business Plan Competition each year in Des Moines.

### **IDM – Rural Database Project**

The Rural Development Council (RDC) Electronic Notebook is an effort to foster better communication among economic development service providers to rural Iowa communities. The Electronic Notebook is a database of all the communities/counties in Iowa and any technical assistance received from economic development service providers. The Institute for Decision Making (IDM) volunteered to develop the electronic notebook with the help of UNI students and RDC partners after the initial vendor bids rendered the database project cost prohibitive. The Electronic Notebook has been developed as a web-based client management and communication tool. Each partnering organization can enter project information regarding either community or county clients and the types of services provided. The database is searchable by community, service provider, type of service provided, and by several other categories. In addition to the RDC, partners in the Electronic Notebook project include the Iowa Department of Economic Development, USDA Rural Development Administration, Iowa State Extension to Communities and IDM.

### **RRTTC – Recycling in Iowa**

The Recycling, Reuse, and Technology Transfer Center (RRTTC) has important working relationships with national and state of Iowa recycling industry associations, governmental agencies, and private citizens supportive of recycling in Iowa. This would include, but is not limited to, Iowa Recycling Association, Iowa Waste Exchange, Recycle Iowa (Department of Economic Development's State Marketing Assistance Program), Iowa Society of Solid Waste Operators, Beautify Iowa and the National Recycling Association. Waste management aspects of the movement toward sustainable industrial practice or industrial ecology has placed the RRTTC in the center of several statewide activities examining the sustainability movement, such as the Iowa Department of Economic Development's Working Group on Sustainability, coordinated by Recycle Iowa.

### **RRTTC – Research Funding for Regents Institutions**

The RRTTC encourages faculty from all Iowa Regents institutions to apply for funding for investigative research. For example, the RRTTC is a collaborator with Iowa State University and the UNI Metal Casting Center on a Department of Energy 2000 Energy Program Special Project, *Iowa Industries of the Future*.

### **IWRC Partners With the Iowa DNR and IDED**

The IWRC relies heavily on its partnerships with several state agencies, primarily the Iowa Department of Natural Resources (IDNR) and Iowa Department of Economic Development (IDED). The IDNR has been a resource for state regulatory guidance to ensure accurate information delivery, particularly for our Iowa Air Emissions Assistance Program. Many of our referrals come from IDNR field office inspectors who have discovered violations at a

small business. These businesses are advised to work with the IWRC to correct these violations in lieu of costly fines.

IDED has established a regulatory affairs department within the agency to assist new businesses locating in Iowa that have permit needs and resource referral needs. This program also houses the Recycle Iowa office, promoting market development for recyclables. IWRC coordinates many of its activities with IDED as one of its resource referrals and as the technical manager for the Iowa Waste Exchange.

## **UNI Regional Business Center Mixed Use Incubator**

The first UNI incubator was opened in June of 2001 in Waterloo as part of the new UNI Regional Business Center. The RBC incubator is an outreach partnership between the community of Waterloo, the federal Economic Development Administration (EDA) and the University of Northern Iowa. The incubator evolved from a desire by participants to revitalize the downtown Waterloo central business district, provide business consulting services and offer experiential opportunities for UNI students. The incubator consists of both on-site office suites and a rural virtual incubator program.

### **On-Site Suites**

The incubator has seven office suites located in the Regional Business Center facility. The suites are designed to host micro-ventures in the service or technology sectors. More important than the space for the entrepreneurs is the technical assistance and guidance they receive. When an entrepreneur becomes a tenant in the incubator, they enroll in a business development program. Business training is the key component of the program, including FastTrac training, one-on-one counseling, specialized technical expertise from outside consultants and access to an extensive library of data sources. To augment the training and technical assistance, tenants are provided with a computer and appropriate access to technology, phone service, access to computer peripheral equipment and central reception services.

In the first few months, four of the suites were filled with a diverse array of businesses. They include following:

**Bob Justis Enterprises** is a multi-dimensional public relations firm. Bob Justis Enterprises provides commercial voiceovers, on-camera talent, fund-raising services, plus leadership and customer service presentations. Proprietor Bob Justis is most recognized locally as the "voice" of the University of Northern Iowa Panthers for all major UNI Athletic events.

**Cedar Hills Texaco LLC** is a new convenience store operation involved in pre-venture set-up. This company is utilizing the UNI RBC as a beachhead in preparing for the construction and eventual opening of their new facility in Cedar Falls. Construction of the 5,000 square foot operation will commence this fall and is scheduled for opening in April 2002. In addition to offering Texaco brand petroleum products, Cedar Hills Texaco will also feature a walk-in refrigerated beer and wine department, along with on-site sub sandwich and pizza shops. General Manager David Pedelty is currently a senior at UNI and Assistant Manager Brian Badding recently graduated from UNI.

**Click Collections** specializes in the production of "virtual collections." This is accomplished through the process of digitally archiving a public or private collection of art, photos and/or antiques on a CD. The process provides a high-tech but secure archive, while adding animation and graphics in delivering a multi-media presentation. Click Collections proprietor, Sara Cole, has secured contracts with various public museums including virtually archiving the entire collection of artwork for the Waterloo Center for the Arts. She is in the process of expanding her venture in marketing similar services and

products to museums and to individuals interested in preserving and archiving precious family portraits.

**KGC Entertainment Inc.** is a public relations/events-planning firm. KGC Entertainment specializes in contracting with independent musicians to develop promotional materials utilizing leading edge technology. This technology involves the production of a media kit that features a business card size interactive CD. KGC Entertainment also provides special events management services to various companies and non-profit organizations. KGC Entertainment Inc. President, Dora (Kisha) Raine, is a recent graduate of UNI with a M.A. in Public Relations.

### **Virtual Incubator**

The Rural Incubator Services Program (RISP) is a technology-driven incubator program designed to provide customized technical assistance and virtual incubation services to entrepreneurs in rural Iowa. The goal of RISP is to increase opportunities to expand the number and quality of entrepreneurs in rural Iowa - including women and minorities who are underrepresented in Iowa entrepreneurship development.

The RISP incubator is expected to be a model for business technology learning projects statewide. The RISP program has three components: an on-site customized training program, an internet-based virtual incubator program matching certified UNI College of Business students with rural entrepreneurs and an ongoing internet-driven learning network. Ten graduate and undergraduate students will be actively involved in each community where the virtual incubator is hosted. The program prototype has been launched in New Hampton, Iowa, with 25 participants. Five new business start-ups and two business expansions are expected to result from the New Hampton prototype.

## **Examples of UNI's Contributions Toward the State's Targeted Industry Clusters Life Sciences, Advanced Manufacturing and Information Solutions**

### **ABIL – Life Sciences**

During FYs 2000 and 2001, UNI-ABIL presented, or is scheduled to present, findings to meetings of the National Lubricating Grease Institute, American Railway Engineering and Maintenance of Way Association, Soy 2000, GreenTech 2000, and European Grease Lubricating Institute. Program activities were also the focus of frequent articles in newspapers and magazines targeted to reach general-public audiences.

In addition to its activities in support of the West Central Cooperative's commercialization efforts, UNI-ABIL provided applied research and technology deployment activities relative to its partnership with Waverly Light and Power (and a marketing firm well known in the public power industry) to pursue commercialization of a dielectric transformer coolant. The program established working partnerships with several railroads and a leading railroad supplier to field test an emerging rail-flange lubricant. In addition, a national trucking fleet (along with several other mid-size firms) began to field test a semi-truck fifth-wheel grease.

UNI-ABIL maintained expanding partnerships with its funding agencies and multi-national equipment and additive manufacturers, a regional lubricant manufacturer, several federal agencies and national laboratories (including EPA, Department of Army, and Sandia National Laboratories). ABIL's director serves on the Governor's Life Sciences Committee and ABIL's research focuses on expanding uses for agricultural products.

### **ELM Evolves From ABIL Research**

As a result of work carried out by UNI-ABIL in previous years, and in an effort to bridge the gap between the research lab and the marketplace, the UNI Foundation made the decision to engage in the creation of a for-profit entity, Environmental Lubricants Manufacturing Inc. (ELM), and has given ELM exclusive license to ABIL-developed lubricants technology. ELM, with the assistance of ABIL, is successfully securing preferential relationships with suppliers such as DuPont, and distributors such as the Schumacher Elevator Company (Denver, IA). In addition, ABIL has continued to support the efforts of previous non-exclusive license holders, such as West Central Cooperative, to expand the market for soybean-based lubricants.

### **IDM – All Clusters**

IDM assembled approximately 80 industry sector reports to help local development organizations understand the location requirements of *new economy* industry clusters and conducted six target industry analyses for communities/regions in Iowa.

### **MCC – Advanced Manufacturing**

The partnerships established with 11 large suppliers of foundry raw materials provide the MCC with information to apply new technologies in Iowa's smaller foundries. This assistance includes information for problem solving and testing products for the individual foundry's process improvements. The MCC maintains a consortium of small foundries to assist and train them on solidification modeling.

The MCC supports the advanced manufacturing cluster groups. The director of the MCC was on the initial advisory group to develop the advanced manufacturing recommendation to the governor. The center is also active with two foundry consortiums that can be developed into a defined cluster.

#### **RRTTC – Advanced Manufacturing**

The RRTTC contributes to Iowa's cluster areas of life science and advanced manufacturing by providing technical assistance to Iowa companies and communities regarding the development of economical approaches to solving intractable solid waste problems and providing research and guidance on public health concerns as they relate to solid waste concerns. This assistance is in the form of brief consultations, student internship projects and in-depth research projects focusing on the above problems, including projects that emphasize sustainable by-product reutilization and industrial ecology.

Working to develop better by-product reutilization and industrial efficiency in the implementation of these technologies, the RRTTC funds many applied research projects in the recycling and by-product reutilization/industrial ecology sectors. Through the funding of student research, technology deployment and applied research is encouraged. Both qualitative and quantitative research is being performed through RRTTC.

#### **ITOP – Advanced Manufacturing**

Technical training was provided by ITOP to support Iowa's targeted clusters of advanced manufacturing by offering courses in Bindery Operations, CNC Programming, Quality Technician and Hydraulics.

#### **IWRC – Life Sciences and Advanced Manufacturing**

The IWRC has primarily served two of the State's three cluster groups: Life Sciences and Advanced Manufacturing. Since its inception in 1988, IWRC has provided on-site environmental compliance technical assistance to more than 2,100 small businesses within these cluster groups. The IWRC averages more than 2,000 assistance calls annually through its 1-800 hotline. More than 1,000 presentations have been conducted to these groups both within Iowa and nationally to more than 51,000 people.



